**In the United States Patent and Trademark Office**

Application No.: 09/925278
Filed: 8/8/2001
Title: Word Voter for Redundant Systems
Applicant(s): Subhasish Mitra
Examiner: R. Stephen Dildine Jr.
Art Unit: 2133

Mailed 8-12-04
Palo Alto, CA

Information Disclosure Statement

Commissioner of Patents and Trademarks
Alexandria, VA 22313

Dear Sir or Madam:

Attached is a completed Form PTO-1449 and copies of the pertinent parts of the references cited thereon. It is requested that the document(s) on the enclosed form be made of record.

Part I (Authority)

This statement is filed pursuant to:

() 37 C.F.R. § 1.97(b).

This information disclosure statement is filed either (1) within three months of the filing date of the national applications; (2) within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application; or (3) before the mailing date of a first office action on the merits, whichever event occurs last.

Accordingly, this information disclosure statement requires no fee and no certification.

(X) 37 C.F.R. § 1.97(c).

This information disclosure statement is filed after the period specified in 37 C.F.R. § 1.97(b), but before the mailing date of either (1) a final action under 37 C.F.R. § 1.113 or (2) a notice of allowance under 37 C.F.R. § 1.311.

Accordingly, this information disclosure statement requires either the fee specified in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under 37 C.F.R. § 1.97(c) (\$180), or a certification according to 37 C.F.R. § 1.97(e).

() 37 C.F.R. § 1.97(d).

This information disclosure statement is filed after the period specified in 37 C.F.R. § 1.97(c).

Accordingly, this information disclosure statement requires the petition fee specified in 37 C.F.R. § 1.17(i)(1) to consider an information disclosure statement under 37 C.F.R. § 1.97(d) (\$180), a certification according to 37 C.F.R. § 1.97(e), and a petition requesting consideration of the information disclosure statement.

08/17/2004 WASFAW1 00000018 09925278

01 FC:1806

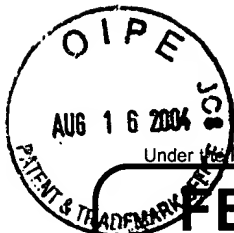
180.00 OP

Conditional Petition

It is respectfully requested that this information disclosure statement be considered, good cause being presented in Part III herein (certification). Please treat this paper as the required petition.

If this statement crosses in the mail with an office action, or is otherwise not in the indicated category of 37 C.F.R. § 1.97, it is respectfully requested that this statement be treated in the next appropriate category and made of record.

To the extent required, please treat this paper as a conditional petition for acceptance of the information disclosure statement.



PTO/SB/17 (10-03)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 180.00

Complete if Known

Application Number	09/925,278
Filing Date	8/8/2001
First Named Inventor	Subbasish Mitra
Examiner Name	R. Stephen Dildine Jr.
Art Unit	2133
Attorney Docket No.	S00-086/US

METHOD OF PAYMENT (check all that apply)☐ Check ☒ Credit card ☐ Money Order ☐ Other ☐ None☐ Deposit Account:Deposit Account Number
Deposit Account Name

The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments☐ Charge any additional fee(s) or any underpayment of fee(s)☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	
SUBTOTAL (1)				(\$)	

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

	Extra Claims	Fee from below	Fee Paid
Total Claims	-20** =	X	
Independent Claims	-3** =	X	
Multiple Dependent			

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent
SUBTOTAL (2)				(\$)

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	180.00
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$) 180.00

SUBMITTED BY

(Complete (if applicable))

Name (Print/Type)

Ron Jacobs

Registration No.
(Attorney/Agent)

50,142

Telephone

650-424-0100

Signature

Date

8-12-04

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.

SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



PTO/SB/21 (08-03)

Approved for use through 08/30/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Application Number	09/925,278
Filing Date	8/8/2001
First Named Inventor	Subbasish Mitra
Art Unit	2133
Examiner Name	R. Stephen Dildine Jr.
Attorney Docket Number	S00-086/US

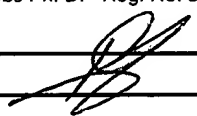
Total Number of Pages in This Submission

ENCLOSURES (Check all that apply)

- | | | |
|---|--|--|
| <input type="checkbox"/> Fee Transmittal Form
<input type="checkbox"/> Fee Attached
<input type="checkbox"/> Amendment/Reply
<input type="checkbox"/> After Final
<input type="checkbox"/> Affidavits/declaration(s)
<input type="checkbox"/> Extension of Time Request
<input type="checkbox"/> Express Abandonment Request
<input checked="" type="checkbox"/> Information Disclosure Statement
<input type="checkbox"/> Certified Copy of Priority Document(s)
<input type="checkbox"/> Response to Missing Parts/
Incomplete Application
<input type="checkbox"/> Response to Missing Parts
under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Drawing(s)
<input type="checkbox"/> Licensing-related Papers
<input type="checkbox"/> Petition
<input type="checkbox"/> Petition to Convert to a
Provisional Application
<input type="checkbox"/> Power of Attorney, Revocation
Change of Correspondence Address
<input type="checkbox"/> Terminal Disclaimer
<input type="checkbox"/> Request for Refund
<input type="checkbox"/> CD, Number of CD(s) _____ | <input type="checkbox"/> After Allowance communication
to Technology Center (TC)
<input type="checkbox"/> Appeal Communication to Board
of Appeals and Interferences
<input type="checkbox"/> Appeal Communication to TC
(Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Status Letter
<input type="checkbox"/> Other Enclosure(s) (please
Identify below): |
|---|--|--|

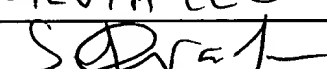
Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Ron Jacobs Ph. D. Reg. No. 50,142
Signature	
Date	

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Typed or printed name	SYLVIA LEE		
Signature		Date	8/12/04

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Part II (Payment)

A check is enclosed as indicated:

- ☐ No fee is due.
- ☒ The fee specified in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under 37 C.F.R. § 1.97(c) is enclosed (\$180).
- ☐ The petition fee specified in 37 C.F.R. § 1.17(i)(1) to consider an information disclosure statement under 37 C.F.R. § 1.97(d) is enclosed (\$180).

Part III (Certification)

Pursuant to 37 C.F.R. § 1.97(e), I certify:

- ☒ No certification is necessary.
- ☐ (1) Each item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the statement.
 - ☐ The "communication from a foreign patent office" referred to in the certification is an International Search Report, possibly issued by the U.S. Patent and Trademark Office in its capacity as an International Search Authority or International Preliminary Examining Authority.
 - ☐ The "counterpart foreign application" referred to in the certification corresponds to an ancestor or descendant application of the application for which this information disclosure statement is filed.
- ☐ (2) No item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c), more than three months prior to the filing of the statement.

Part IV (Additional Statement)

An additional statement regarding these items of information ☐ is, ☒ is not, enclosed.

Copies of the cited documents ☒ are enclosed, ☐ are of record in parent application Serial No. _____ and will be provided if the Examiner deems it convenient.

Respectfully submitted,

Dated: 8-12-04



Ron Jacobs
Reg. No. 50,142
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Palo Alto, CA 94306
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fax: (650) 424-0141

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE	ATTY. DOCKET NO. S00-086/US	SERIAL NO. 09/925,278
LIST OF DOCUMENTS CITED BY APPLICANT (Use several sheets if necessary)	APPLICANT Subbhasish Mitra	
	FILING DATE 8/8/2001	GROUP 2133

U.S. PATENT DOCUMENTS

INITIAL	DOCUMENT NUMBER	DATE	NAME	RELEVANT INFORMATION
A	4 3 7 5 6 8 3	03/01/1983	Wensley	37136
B	4 0 1 7 7 4 2	04/12/1977	James	307/357
C	6 0 4 4 4 8 7	03/28/2000	Li	714/797
D	5 0 8 4 8 7 8	06/28/1992	Kanekawa et al.	371/36
E	3 6 8 1 5 7 8	08/01/1972	Stevens	235/53
F	4 8 7 3 6 8 5	10/10/1998	Milis Jr.	371/36
G	4 0 9 1 2 9 3	05/23/1978	Ando	307/205
H	6 0 4 4 4 8 6	03/28/2000	Underseth et al.	714/797
I	5 9 9 5 5 5 9	11/30/1999	Hedberg	375/479
J	5 7 1 9 8 7 1	02/17/1998	Helm et al.	370/479
K	5 5 0 2 7 2 8	03/26/1996	Smith III	395/182.03

FOREIGN PATENT DOCUMENTS

2-letter code	DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION
				YES NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

L	[De Sousa 78] De Sousa, P.T., and F.P. Mathur, "Sift-Out-Modular Redundancy," IEEE Trans. Computers, Vol. C-27, No. 7, pp. 624-627, July 1978
M	[Dennis 74] Dennis, N. G., "Ultra-reliable Voter Switches with a Bibliography of Mechanization," Microelectronics and Reliability, pp. 299-308, August 1974
N	[Gersting 91] Gersting, J. L., et al., "A Comparison of Voting Algorithms for N-Version Programming," Proc. Annual Hawaii Intl. Conf. on System Sciences, pp. 253-262, 1991.
O	[Lala 94] Lala, J. H. and R. E. Harper, "Architectural Principles for Safety-critical Real-time Applications," Proc. of the IEEE, Vol. 82, No. 1, pp. 25-40, Jan. 1994.
P	[Mitra 99] Mitra, S., N. R. Saxena and E. J. McCluskey, "A Design Diversity Metric and Reliability Analysis for Redundant Systems," Proc. Intl. Test Conf., pp. 662-671, 1999.
Q	[Mitra 00] Mitra, S., and E. J. McCluskey, "Design of Redundant Systems Protected Against Common-Mode Failures," Technical Report, Center for Reliable Computing, Stanford Univ., CRC-TR-00-2, 2000. (http://crc.stanford.edu)
R	[Reed 97] Reed, R., et al., "Heavy Ion and Proton-Induced Single Event Multiple Upset," IEEE Trans. on Nuclear Science, Vol. 44, No. 6, pp. 2224-2229, July 1997.



		[Siewiorek 75] Siewiorek, D. P., "Reliability Modeling of Compensating Module Failures in Majority Voted Redundancy," <i>IEEE Trans. Computers</i> , Vol. 24, No. 5, pp. 525-533, 1975.
		[Siewiorek 92] Siewiorek, D. P. and R. S. Swarz, <i>Reliable Computer Systems: Design and Evaluation</i> , Digital Press, 1992.
	U	[TI 76] <i>The TTL Data Book</i> , Texas Instruments, 1976.
	V	[Trivedi 82] Trivedi, K.S., <i>Probability and Statistics with Reliability, Queuing, and Computer Science Applications</i> , Prentice Hall, Englewood Cliffs, NJ, USA, 1982.
	W	[Von Neumann 56] Von Neumann, J., "Probabilistic Logics and the Synthesis of Reliable Organisms from Unreliable Components," <i>Automata Studies, Ann. of Math. Studies</i> , no. 34, C. E. Shannon and J. McCarthy, Eds., Princeton University Press, pp. 43-98, 1956.
	X	[Wong 96] Wong, K., <i>et al.</i> , "A VLSI Median Voter for Fault Tolerant Signal Processing Applications," <i>Proc. Intl. Conf. Signal Processing</i> , pp. 1574-1577, 1996.

EXAMINER

DATE CONSIDERED

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.